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EG&G ROCKY FLATS



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June 11, 1991

91-RF-3334

Robert M. Nelson, Jr. -
Manager
DOE, RFO

Attn: F. R. Lockhart

**LAG DELIVERABLE: REVISION TO PHASE III RCRA FACILITIES INVESTIGATION/REMEDIAL
 INVESTIGATION (RFI/RI) WORK PLAN FOR OPERATIONAL UNIT NO. 1 (OU 1) -
 JEE-0095-91**

In accordance with recent discussions among EG&G Rocky Flats, Inc., Department of Energy (DOE), Environmental Protection Agency (EPA), and Colorado Department of Health (CDH) personnel, enclosed are copies of the revised page 5-3 to the OU 1 RFI/RI Work Plan. The revised version of this page reflects the new downhole sampling procedures, as discussed at meetings among all parties on May 17, 1991 and May 22, 1991, and conforms with the current Standard Operating Procedures which have also been revised accordingly.

In order to avoid confusion, it is requested that this page be inserted in every copy of the Work Plan and that the obsolete page be removed and destroyed. Sufficient copies of the page are enclosed for this purpose.

Please contact Cynthia Gee of the Remediation Programs Division at extension 5910 when a transmittal letter is ready. We will then deliver copies of the replacement pages to EPA and CDH.

**J. E. Evered, Director
Environmental Management**

CBG plf

Orig. and 2 cc - R. M. Nelson, Jr.

**Enclosures:
As Stated**

CLASSIFICATION:

UCNI		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

**AUTHORIZED CLASSIFIER
SIGNATURE**

DATE 06-5-77

IN REPLY TO LTR NO.

N/A

PC#
LTR APPROVALS:
TCG ~~EE~~ JPK ~~W~~
JEE ~~EE~~ 30619
ORIG & TYPEIST INITIALS
TBG/PLF

ADMIN RECORD

REVIEWED FOR A FOREIGN DISSEM
BY G. T. GARDNER 620
DATE 7-12-93

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in soils directly beneath the sites. In addition, ground-water monitoring wells will be installed adjacent to some of the boreholes to characterize ground-water quality directly beneath the sites. This section discusses those wells and boreholes which will be drilled for source characterization. Wells to be drilled outside of IHSSs for characterizing the extent of contamination are discussed in Section 5.3.1. All proposed Phase III RFI/RI wells and boreholes are shown on Plate 1. Drilling, sampling, and well installation will follow the Rocky Flats Plant ER Program SOP (EG&G, 1990g).

Boreholes to be drilled into IHSSs will extend from the ground surface to 6 feet below the base of alluvial material if no sandstone is encountered. Continuous core will be collected for geologic descriptions for the entire borehole depth. From this core, discrete samples will be submitted for laboratory volatile organic analyses (VOA) beginning two feet from the ground surface, continuing every 4 feet to the water table. A VOA sample will also be collected from the bottom of the first drive sample below the water table. In addition, a discrete VOA sample will be submitted to the laboratory if staining, discoloration, odor or other anomaly is observed during drilling. A final VOA sample will be collected for chemical analysis from the base of the first drive within bedrock immediately below the alluvial material. Core from saturated surficial materials will not be submitted to the laboratory, as the presence of water in this zone will affect interpretation of chemical results. If drilling is to continue below the standard 6 feet into bedrock (i.e., if a sandstone is encountered) surface casing will be grouted into the borehole through surficial materials. In addition to the VOA samples, linear samples from the core will be submitted to the laboratory for analysis of the remaining chemical parameters from every consecutive 6 foot interval to the base of weathering. Details of this sampling are found in SOP GT2, Sampling Procedure 5.3. To further characterize weathered bedrock immediately beneath the sites, fracture patterns (both degree of fracturing and vertical extent) will be noted on the borehole logs and in situ packer tests will be performed in the bedrock where drilling conditions allow.

Alluvial ground-water monitoring wells will be installed adjacent to some boreholes to characterize ground-water quality directly beneath IHSSs. In addition, bedrock wells will be installed adjacent to boreholes where weathered sandstone is encountered to evaluate the potential downward migration of contaminants. Wells will be drilled, sampled, and completed in accordance with the Rocky Flats Plant ER Program SOP (EG&G, 1990g). Source characterization borehole and monitor well locations are discussed in the following sections.

5.2.1 Sample Locations

5.2.1.1 Oil Sludge Pit Site (IHSS Ref. No. 102)

The location of IHSS 102 has been revised from that shown in the Phase II RI report (Rockwell International, 1988a) based on further review of historical aerial photographs. Specifically, the Oil Sludge Pit Site appears on a 1955 aerial photo. Also evident on the 1955 photos is seepage from the pit as shown on Plate 1. The pit was covered after its use (Rockwell International, 1987c), and it is no longer visible on 1959 aerial photographs. Additional soil and ground-water sampling are needed within, surrounding, and downgradient